

PATENT**Application # 10/064,251**

Attorney Docket # 2001-0337 (1014-284)

AMENDMENTS**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A method for signaling in a mesh telecommunication network comprising the ~~the~~ steps of:
 - (i) receiving a request to establish a label switched path through the mesh network;
 - (ii) computing a service path and a restoration path; and
 - (iii) sending a label switched path request along the restoration path requesting reservation of shared resources along the restoration path without allocating the shared resources and wherein the label switched path request includes service path information.
2. (Original) The invention of claim 1 wherein the service path information comprises a list of links used along the service path.
3. (Original) The invention of claim 1 wherein the service path information comprises a list of shared risk link groups traversed by the service path.
4. (Original) The invention of claim 1 wherein the label switched path request is an RSVP PATH message.
5. (Original) The invention of claim 4 wherein the mesh network is an optical network.
6. (Currently Amended) A method for signaling in a mesh telecommunication network comprising the ~~the~~ steps of:
 - (i) ~~receiving a request to normalize a restored connection;~~
 - (ii) bridging a signal onto both a service path and a restoration path to a destination node in the mesh network the signal bridged responsive to a request to normalize a restored connection;

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(iii)-sending a first message to the destination node requesting that the destination node bridge and roll the service path and the restoration path; and

(iv)-if a second message is received from the destination node confirming that the destination node has bridged and rolled the service path and the restoration path, halting transmissions along the restoration path and sending a third message to the destination node confirming that the connection is normalized, the second message comprising an object that comprises a code, a first possible value of the code indicative that bridging has been completed, a second possible value of the code indicative that a roll/bridge has been completed, a third possible value of the code indicative that a roll has been completed.

7. (Original) The invention of claim 6 wherein the messages are RSVP messages.

8. (Original) The invention of claim 6 further comprising the step of verifying the service path prior to normalizing the connection.

9. (Original) The invention of claim 8 wherein the service path is verified using LMP.

10. (Currently Amended) A method for signaling in a mesh telecommunication network comprising the steps of:

~~(i) receiving a first message from a node in the mesh network requesting that a service path and a restoration path be bridged and rolled in order to normalize a connection;~~

~~—— (ii) bridging a signal onto both a service path and a restoration path to a node in the mesh network and rolling the signal onto the service path;~~

~~—— (iii) sending a second message to the a source node confirming that the a service path and the a restoration path have been bridged and rolled, the second message sent responsive to a received first message, the first message sent responsive to a transmission of a signal, the signal bridged onto both the service path and a restoration path to a destination node in the mesh network, the bridged signal transmitted responsive to a request to normalize a restored connection, the second message comprising an object that comprises a code, a first possible~~

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value of the code indicative that bridging has been completed, a second possible value of the code indicative that a roll/bridge has been completed, a third possible value of the code indicative that a roll has been completed; and

(iv) if a third message is received from the source node confirming that the connection has been normalized, ~~halting transmissions along the restoration path and~~ sending a fourth message along the restoration path freeing resources reserved for the restoration path.

11. (Original) The invention of claim 10 wherein the messages are RSVP messages.
12. (Original) The invention of claim 10 further comprising the step of verifying the service path prior to normalizing the connection.
13. (Original) The invention of claim 12 wherein the service path is verified using LMP.
14. (New) The method of claim 10, further comprising:
resolving a determined label contention associated with normalizing the connection via a downstream label assignment for a uni-directional Label Switched Path.
15. (New) The method of claim 10, further comprising:
resolving a determined label contention associated with normalizing the connection via a higher node identification label assignment for a bi-directional Label Switched Path.
16. (New) The method of claim 1, further comprising:
removing the reservation of shared resources along the restoration path responsive to an error message flag indicating that the restoration path could not be setup.
17. (New) The method of claim 1, further comprising:
reserving the resources along the restoration path if and only if the label switched path request comprises a shared reservation flag, the shared reservation flag indicative of whether

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other flags are needed to support restoration.

18. (New) The method of claim 1, further comprising:
allocating the shared resources along the restoration path responsive to a detected failure in the mesh network.
19. (New) The method of claim 1, wherein the label switched path request comprises a bit flag indicative of whether the label switched path is the service path or the restoration path.
20. (New) The method of claim 1, wherein the label switched path request comprises a secondary bit indicative that the restoration path is a backup path for the service path.